

## DEPARTMENT OF THE INTERIOR

## Fish and Wildlife Service

## 50 CFR Part 17

**Endangered and Threatened Wildlife and Plants; Proposed Reclassification of the Gila Trout (*Salmo gilae*) From Endangered to Threatened**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule.

**SUMMARY:** The Service proposes to reclassify the Gila trout (*Salmo gilae*), a species endemic to New Mexico and Arizona, from endangered to threatened under provisions of the Endangered Species Act (Act) of 1973, as amended. *Salmo gilae* was originally listed as endangered on March 11, 1967 (32 FR 4001). Based on a 1986 review of status information, the Service has determined that reclassification of the Gila trout to threatened status is warranted because the five original populations have been restored, replicated, and biologically secured, and because seven additional populations have been established within the historic range of this fish. These accomplishments also fulfill criteria for reclassification as given in the species' recovery plan. Included with this proposal is a special rule, which, if made final, will enable the New Mexico Department of Game and Fish to promulgate special regulations allowing public sport fishing for the species. The Service is requesting comments and information pertaining to this proposed reclassification.

**DATES:** Comments from all interested parties must be received by December 7, 1987. Public hearing requests must be received by November 20, 1987.

**ADDRESSES:** Comments and materials concerning this proposal should be sent to the Regional Director, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the Service's Regional Office of Endangered Species, 500 Gold Avenue SW., Room 4000, Albuquerque, New Mexico.

**FOR FURTHER INFORMATION CONTACT:** Gerald Burton, Endangered Species Biologist, Albuquerque, New Mexico (see **ADDRESSES** above) (505/766-3972 or FTS 474-3972).

**SUPPLEMENTARY INFORMATION:****Background**

The Gila trout (*Salmo gilae*) is native to relatively undisturbed, high altitude

mountain streams in Arizona and New Mexico. Historically, Gila trout occurred in the Verde and Agua Fria drainages, Arizona, and in the upper Gila drainage in New Mexico. Gila trout may also have been indigenous to Eagle Creek, Arizona, and some tributaries of the San Francisco River, New Mexico.

When the Gila trout was listed as endangered (March 11, 1967; 32 FR 4001), its range had been reduced to five streams within the Gila National Forest, New Mexico. These five streams were Iron, McKenna, and Spruce Creeks in the Gila Wilderness Area, and Main Diamond and South Diamond Creeks in the Aldo Leopold Wilderness Area. Reasons for the drastic decline of the species included hybridization and competition with and/or predation by non-native rainbow trout (*Salmo gairdneri*), cutthroat trout (*Salmo clarki*), and brown trout (*Salmo trutta*).

Recovery actions initiated after listing have included chemically treating streams within the historic range of the species to remove exotic competitive and predatory fish species, and constructing physical barriers to prevent reinvasion of exotics. The five indigenous populations were thus secured, and seven additional populations were established by replicating these populations. Replication involved moving adults from each successfully reproducing indigenous population and releasing them into the closest suitable renovated stream. The seven populations established in this manner occur in Gap Creek, Prescott National Forest, Arizona; and Trail Canyon, Little, McKnight, Big Dry, Iron, and Sheep Corral Creeks in the Gila National Forest, New Mexico. The populations in Sheep Corral, McKnight, and Gap Creeks represent replications of the morphotype in Main Diamond Creek. The South Diamond Creek population has been replicated in Trail Canyon Creek, and Spruce Creek has been replicated in Big Dry Creek. The Little Creek population is a replication of McKenna Creek. The Iron Creek population has been essentially replicated (or expanded) in Iron Creek by renovating a reach of the creek downstream from the indigenous population and establishing a population there. In summary, twelve secure populations presently exist, including five indigenous and seven reintroduced populations. These stream renovation and transplantation efforts have been accomplished jointly by the Service, U.S. Forest Service, New Mexico Department of Game and Fish, and New Mexico State University.

Surveys of the twelve existing populations indicate that the recovery efforts have been successful. Presently, all five indigenous populations are secure and occupy their habitat to its maximum carrying capacity. Reintroduced populations that have been surveyed are successfully reproducing and will soon fill their habitat to carrying capacity (Turner 1986).

By replicating the five indigenous populations to establish seven additional populations, the Service has fulfilled criteria for reclassifying the Gila trout as threatened as outlined by the Gila Trout Recovery Plan (USFWS 1984). The Plan states that "the species could be considered for downlisting from its present endangered status to a threatened status when survival of the five original ancestral populations is secured and when all morphotypes are successfully replicated or their status is otherwise appreciably improved." The Service has determined that the recovery efforts have improved the status of the Gila trout such that the species is no longer "in danger of extinction throughout all or a significant portion of its range" (i.e., endangered), but that hybridization and/or competition with non-native salmonids still threatens this fish below stream barriers (see Factors "C" and "E" in the "Summary of Factors Affecting the Species" section). Therefore, the Service believes that reclassification to a threatened status is appropriate.

**Summary of Factors Affecting the Species**

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act set forth the procedures for reclassifying species on the Federal Lists. A species may be listed or reclassified as threatened or endangered due to one or more of the five factors described in section 4(a)(1). These factors and their application to the Gila trout (*Salmo gilae* Miller) are as follows:

**A. The present or threatened destruction, modification, or curtailment of its habitat or range.** In the past, Gila trout populations were threatened by habitat destruction due to timber harvesting, mining, and other watershed disturbances. These factors compounded the threats posed by non-native salmonids (see Factors "C" and "E" in the "Summary of Factors Affecting the Species" section for discussions on non-native salmonids). Presently, ten of the eleven creeks that

contain Gila trout occur in Forest Service Wilderness Areas within the Gila National Forest, New Mexico, or the Prescott National Forest, Arizona. The Gila Wilderness Area contains Sheep Corral, Big Dry, Little, McKenna, Spruce, Trail Canyon and Iron Creeks, and the Aldo Leopold Wilderness Area contains South Diamond and Main Diamond Creeks. Gap Creek is within the Cedar Bench Wilderness Area in the Prescott National Forest, Arizona. Habitat protection provided by Wilderness Area regulations will prevent or minimize future habitat destruction.

*B. Overutilization for commercial, recreational, scientific, or educational purposes.* Presently all stream reaches that contain Gila trout are closed to sport fishing. While some illegal fishing takes place, the Service believes that the amount of take is small and has a minimal effect on populations. Most illegal fishing is done by backpackers who are unaware the stream is closed to fishing and who only take a few fish.

Some Gila trout are taken for scientific or educational purposes, but the take is small and controlled through the Federal and State permitting processes.

*C. Disease and predation.* Gila trout are not known to be impacted by various disease and parasites that affect other trout species. The species' lack of parasitism is probably the result of extreme isolation and pristine habitat conditions.

Predation of Gila trout by brown trout has been a serious problem, and continues to be a problem for fish below stream barriers. The brown trout, a non-native salmonid, preys on small Gila trout and is able to severely depress Gila trout populations. In Gila trout streams that were restored, the predation threat was eliminated by chemically removing all fish and reintroducing only native species. Physical stream barriers constructed by the U.S. Forest Service prevent brown trout from moving upstream and preying on Gila trout. However, downstream from these barriers, brown trout and other non-native species remain a threat.

*D. The inadequacy of existing regulatory mechanisms.* Prior to 1967, when the Gila trout was Federally listed as endangered, the species had no legal protection. Listing the species provided recognition, protection, and prohibitions against certain practices (such as take), and also stimulated recovery actions. In response to the Federal listing action, the States of New Mexico and Arizona officially recognized the declining status of the species. Arizona designated the

Gila trout as a threatened species (Group 1), which includes species that are known or suspected to have been extirpated from Arizona but that still exist elsewhere. New Mexico designated the Gila trout as an endangered species (Group 1) on January 24, 1975 (NM State Game Commission Regulation No. 563). Group 1 species are those whose prospects of survival or recruitment in New Mexico are in jeopardy. The designation provides the protection of the New Mexico Wildlife Conservation Act (Sections 17-2-37 through 17-2-46 NMSA 1978) and prohibits taking of such species except under a scientific collecting permit. New Mexico also has a limited ability to protect the habitat of the species through the Habitat Protection Act (Sections 17-6-1 through 17-6-11), through water pollution legislation, and tangentially through a provision which makes it illegal to dewater areas used by game fish (Section 17-4-14).

*E. Other natural or manmade factors affecting its continued existence.* When the Gila trout was listed as endangered, the most important reason for the species' decline was hybridization and competition with and/or predation by non-native salmonids. Due to declining native fish populations, the New Mexico Department of Game and Fish maintained propagation and stocking programs of Gila trout, rainbow trout, cutthroat trout, and brown trout during the early 1900's to improve fishing success. Gila trout were propagated from 1923 to 1935 (USFWS 1984) at the Jenks Cabin Hatchery in the Gila Wilderness, but the program was abandoned because of the hatchery's poor accessibility and low productivity. After early stocking programs were discontinued, the non-native trout species persisted and seriously threatened the genetic purity and survival of the few remaining populations of Gila trout. Recent efforts to recover the species have included eliminating non-native salmonids from the species' historic habitat and building barriers to prevent their reinvasion. Presently, twelve viable populations of Gila trout exist in the absence of non-native salmonids.

Other factors that will continue to affect the Gila trout and its habitat include forest fires, flash floods, and droughts. Flash floods can displace the trout and alter its habitat. A particularly severe flash flood has the potential to displace fifty percent or more of an existing trout population. In the process, many fish are killed or injured and those that do survive are often swept downstream into areas occupied by

rainbow and brown trout with which they are unable to compete. Low water conditions caused by droughts reduce the amount of available habitat and increase the trout's susceptibility to predators such as birds and raccoons. Forest fires have affected and continue to threaten the habitat by causing removal of vegetative cover and declines in water quality due to siltation.

Prior to the introduction of non-native salmonids, forest fires, droughts, and floods probably were not major threats to the species. However, these factors presently are threats because the Gila trout's reduced range and abundance and presumably lowered genetic potential makes the species more vulnerable to catastrophes.

The Service believes that reclassifying the Gila trout from endangered to threatened status is consistent with the Act and that the action will further the conservation and recovery of this species. Threatened status seems appropriate because the number of populations has increased from five to twelve since recovery efforts began. Ten of these populations occur on Forest Service Wilderness Areas, which have regulations providing habitat protection and which are relatively remote from human disturbance. Threatened status also seems appropriate for the Gila trout because the major threats have been reduced by recovery efforts and by the legal protection given under State laws and the Act. Non-native salmonids, which were the major threat to the species, have been removed from the eleven streams that currently support Gila trout. However, non-native trout species remain a threat because the majority of historic Gila trout habitat remains dominated by these species. State and Federal regulations limit the take of Gila trout. Currently, few Gila trout are taken for scientific or educational purposes, and this take is controlled through the State and Federal permitting process. Current State and Federal regulations prohibit taking this species for commercial or sporting purposes. Threats due to natural disasters remain, but are unavoidable risks. Therefore, the Service believes that, given continued careful management, reclassification to a threatened status is appropriate.

#### Critical Habitat

Section 4(a)(3) of the Act requires that to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time a species is determined to be endangered or threatened. The Gila trout, however,

was listed as endangered (32 FR 4001), prior to passage of the Act. Subsequently, no critical habitat was designated because the habitat was included in Forest Service Wilderness Areas and was believed to be adequately protected. Because the same protection remains, the Service finds that no net benefit to the conservation of this species would accrue from designating critical habitat at this time.

#### Effects of Rule

This rule, if made final, would change the status of the Gila trout from endangered to threatened. The final rule would formally recognize that this species is no longer in danger of extinction in the foreseeable future. Reclassifying the species will have no effect on regulations regarding protection and recovery of the species. Protection given to threatened species under sections 7 and 9 of the Act is essentially the same as that given to endangered species. Recovery provisions are the same for threatened species as for endangered species.

An important effect of reclassifying the Gila trout as threatened is that the Secretary would then have the option of promulgating a special rule under section 4(d) of the Act, an option not available for species listed as endangered. The special rule included with this proposal would enable the New Mexico Department of Game and Fish to promulgate special regulations allowing sport fishing for Gila trout. This action has been determined to be necessary and advisable to provide for the conservation of the species, and has been identified in the Gila trout recovery plan as an important recovery effort. Developing a sport fishery for Gila trout will help to reduce the number of fish in streams that have reached or are near carrying capacity. By allowing regulated take, the Service hopes to garner public support for species recovery by showing that Gila trout can provide the same quality of sport fishing as non-native trouts. A sport fishery for Gila trout will be combined with an angler education program and will instruct the public about the value and identifying features of this native species of trout. After a more favorable

public impression of Gila trout as a sport fish is attained, the Service hopes to renovate larger streams and establish more populations. The Service believes there will be no adverse effects of sport fishing on Gila trout because the restored populations are reproducing successfully and are near carrying capacity.

This action will not be an irreversible commitment on the part of the Service. The action is reversible, and reclassifying the Gila trout to endangered would be possible should changes occur in management, habitat, or other factors which alter the present threats to the species' survival and recovery.

#### Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned government agencies, the scientific community, industry, or other interested parties concerning any aspect of this proposal are hereby solicited. Comments are particularly sought regarding:

- (1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to Gila trout;
- (2) Information on environmental impacts that would result from the rule; and
- (3) Possible alternatives to this proposed rule.

Final promulgation of the regulations on Gila trout will take into consideration the comments and any additional information received by the Service, and such communications may lead to adoption of final regulations that differ from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be filed within 45 days of the date of the proposal. Such requests must be made in writing and addressed to the Regional Director (see **ADDRESSES** section).

#### National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the

authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

#### References Cited

Turner, P.R. 1986. Restoration of the Endangered Gila Trout. Typed script of paper presented to Annual Meeting of the Western Division, American Fisheries Society, Portland, Oregon. 12 pp.

U.S. Fish and Wildlife Service. 1984. Gila Trout Recovery Plan. Endangered Species Office, Albuquerque, NM. 52 pp.

#### Author

This proposed rule was prepared by Sue Rutman, Endangered Species Biologist, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103 (505/766-3972 or FTS 474-3972).

#### List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

#### Proposed Regulations Promulgation

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, as set forth below:

#### PART 17—[AMENDED]

1. The authority citation for Part 17 continues to read as follows:

**Authority:** Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*); Pub. L. 99-625, 100 Stat. 3500 (1986), unless otherwise noted.

2. It is proposed to amend § 17.11(h) by revising the entry for Gila trout under "Fishes" to read as follows:

#### § 17.11 Endangered and threatened wildlife.

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(h) • • •

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
FISHES							
Trout, Gila	<i>Salmo gila</i>	U.S.A. (NM,AZ)	Entire	T	1	N/A	17.44(u)

3. It is further proposed to add the following new paragraph (u) as a special rule to § 17.44:

**§ 17.44 Special rules—fishes.**

(u) Gila trout, *Salmo gila*.

(1) No person shall take the species, except in accordance with applicable State fish and wildlife conservation laws and regulations in the following instances: (i) For educational purposes, scientific purposes, the enhancement of propagation or survival of the species, zoological exhibition, and other conservation purposes consistent with

the Act, (ii) during a designated open season, or (iii) incidental to State permitted recreational fishing activities for other species or for Gila trout outside the permitted season, provided that the individual Gila trout taken is immediately returned to its habitat.

(2) Any violation of applicable State fish and wildlife conservation laws or regulations with respect to the taking of this species will also be a violation of the Endangered Species Act.

(3) No person shall possess, sell, deliver, carry transport, ship, import, or export, by any means whatsoever, any such species taken in violation of these

regulations or in violation of applicable State fish and wildlife laws or regulations.

(4) It is unlawful for any person to attempt to commit, solicit another to commit, or cause to be committed, any offense defined in paragraphs (u)(1) through (u)(3) of this section.

Dated: September 22, 1987.

**Susan Recce,**

*Acting Assistant Secretary for Fish and Wildlife and Parks.*

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